

PATENT
Serial No. 10/535,056
Amendment in Reply to Office Action of January 17, 2007

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) Travelling-wave A traveling-wave amplifier comprising two transmission lines, and at least two amplifiers, said at least two amplifiers being coupled anti-parallel to said transmission lines, wherein a phase of said at least two amplifiers provides phase matching.

2. (Currently amended) Travelling-wave The traveling-wave amplifier according to claim 1, wherein further comprising coupling means are provided for coupling said at least two amplifiers to said transmission lines, respectively.

3. (Currently amended) Travelling-wave The traveling-wave amplifier according to claim 1, wherein said coupling of an input

PATENT
Serial No. 10/535,056
Amendment in Reply to Office Action of January 17, 2007

port of one amplifier of said at least two amplifiers to one of said transmission lines is spatially set off from the a coupling of an output port of said one amplifier to the other of said at least two transmission lines.

4. (Currently amended) Travelling-wave The traveling-wave amplifier according to claim 2, wherein said coupling means are electrical connections.

5. (Currently amended) Travelling-wave The traveling-wave amplifier according to claim 2, wherein said coupling means are directional coupling circuits.

6. (Currently amended) Travelling-wave The traveling-wave amplifier according to claim 1, wherein the phase of the output signal of said amplifiers is matched with the phase of the travelling-wave traveling-wave on the respective transmission line.

7. (Currently amended) Travelling-wave A traveling-wave amplifier according to claim 3, comprising transmission lines, and

PATENT

Serial No. 10/535,056

Amendment in Reply to Office Action of January 17, 2007

at least two amplifiers, said at least two amplifiers being coupled anti-parallel to said transmission lines, wherein coupling of an input port of one amplifier of said at least two amplifiers to one of said transmission lines has a spatial offset from a coupling of an output port of said one amplifier to the other of said at least two transmission lines, and wherein said spatial offset provides said phase matching.

Claim 8 (Canceled)

9. (Currently amended) Travelling-wave A traveling-wave amplifier according to claim 2, comprising transmission lines, at least two amplifiers, and coupling means for coupling said at least two amplifiers to said transmission lines, respectively, said at least two amplifiers being coupled anti-parallel to said transmission lines, wherein said coupling means provide said phase matching.

10. (Currently amended) Travelling-wave The traveling-wave amplifier according to claim 1, wherein said amplifiers retrieve

PATENT
Serial No. 10/535,056
Amendment in Reply to Office Action of January 17, 2007

DC-bias voltage from said transmission lines.

11. (Currently amended) Method-A method for providing travelling-wave traveling-wave amplification, in particular with a travelling-wave traveling-wave amplifier according to claim 1, with two having transmission lines and at least two amplifiers, where said travelling-waves wherein traveling-wave at said transmission lines have a phase difference of 180°, where the method comprising the acts of:

feeding an output of a pair of said amplifiers is fed to said transmission lines anti-parallel such that the travelling-wave traveling-wave of a first transmission line is fed to a first amplifier,

adding by said first amplifier adds an amplified signal to the travelling-wave traveling-wave of said second transmission line, and

feeding the travelling-wave traveling-wave of said second transmission line is fed to a second amplifier, and

adding by said second amplifier adds an amplified signal to the travelling-wave traveling-wave of said first transmission line.

PATENT
Serial No. 10/535,056
Amendment in Reply to Office Action of January 17, 2007

12. (Currently amended) Use of ~~travelling wave amplifiers~~ the
traveling-wave amplifier according to claim 1, in optical switch
matrices, optical communication systems, RF wideband products,
microwave communication, set-top boxes for satellite TV or
satellite communication, anti-collision radar, wireless local
loops, advanced IC processors such as GaAs and InP processes.